

TITLE 8:

ELEVATOR SAFETY ORDERS

CHAPTER 4, SUBCHAPTER 6, ARTICLE 1, SECTION 3000; ARTICLE 2, SECTION 3001; ARTICLE 6, SECTION 3009; ARTICLE 15, SECTIONS 3093 THROUGH 3093.60; AND ARTICLE 36, SECTION 3136

TITLE 24:

PART 7, ARTICLE 7-6, SECTION 7-3009; ARTICLE 7-15, SECTIONS 7-3093 THROUGH 7-3093.60; AND ARTICLE 7-36, SECTION 7-3136

SPECIAL ACCESS ELEVATORS AND LIFTS

Heard at the February 22, 2001, Public Hearing
Adopted on April 19, 2001
Filed with Secretary of State on August 29, 2001
Effective September 28, 2001

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 1 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 3000(a) to read:

Article 1. Application

§3000. Application.

(a) Where Applicable. The Elevator Safety Orders are applicable to ~~all places of employment as defined in Division 5, Part 1, Chapter 1, of the Labor Code.~~ elevators in the State of California except:

~~Note 1: The Elevator Safety Orders are applied to all elevators in the State of California under the jurisdiction of the Division except:~~

- (1) Elevators under the jurisdiction of the United States government.
- (2) Elevators located in a single-unit private home and not accessible to the public.
- (3) Elevators located in a multiunit residential building serving no more than two dwelling units and not accessible to the public.

EXCEPTION TO ~~NOTE 1~~(a)(3): See section 3001(b)(5).

Note 2: Unless otherwise designated in this subchapter, the term “Division” refers to the current Division of Occupational Safety and Health or any of its predecessors including the former Division of Industrial Safety or the Division of Occupational Safety and Health Administration. Reference to the former Division of Industrial Safety or Division of Occupational Safety and Health Administration in these orders is meant to refer to their successor, the Division of Occupational Safety and Health, or any subsequent successor agency.

(Title 24, Part 7, Section 7-3000(a))

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 7301, 7308, 7317, Labor Code; and Section 18943(b), Health and Safety Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 2 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 3001(b)(5) to read:

§3001. Permit to Operate.

* * * * *

(b) Inspections Required.

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(5) Elevators in a multiunit residential building serving no more than two dwelling units and not accessible to the public shall be inspected by the Division upon completion of installation prior to being placed in service, or after alterations prior to being returned to service. The inspection shall be for safety and compliance with applicable provisions in ANSI/ASME A17.1-1984, parts V and XXI, which are hereby incorporated by reference. Elevators installed after September 28, 2001 shall be inspected for safety and compliance with applicable provisions in either ASME A17.1-1996, Part 5, hereby incorporated by reference; or ASME A18.1-1999, Sections 5, 6, and 7, hereby incorporated by reference.

(6) Special access elevators installed after September 28, 2001 shall be inspected for safety and compliance with the applicable provisions of Article 15, Special Access Elevators and Special Access Lifts, Sections 3093-3093.60 of the Elevator Safety Orders.

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3, 7304(b), and 7317; and 7317, Labor Code.

* OAL to insert the effective date of the regulation.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 3 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend the following definition, and add new definition in alphabetical order to Section 3009 to read:

§3009. Definitions.

* * * * *

Elevator, Private Residence. ~~A passenger elevator which is limited in size, capacity, rise, and speed, and is installed in a private residence or in a multiple dwelling as a means of access to a private residence~~ See Elevator, Special Access.

Elevator, Sidewalk. A freight elevator which operates through an area (usually the sidewalk) exterior to the building or structure and floor levels below. The exterior area (sidewalk) is protected by sidewalk doors that are opened by the car as it ascends. Sidewalk elevators without sidewalk doors are permissible (See Section 3075) only where the top landing is at ground level.

Elevator, Special Access. A passenger elevator that is limited in size, capacity, rise, and speed; installed as a means of access for persons with disabilities.

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(Title 24, Part 7, Section 7-3009)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(b), Health and Safety Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 4 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend title of Article 15 to read:

Article 15. Special Access Elevators and Special Access Lifts

Amend Sections 3093 through 3093.60 to read:

§3093. ~~Private Residence Type~~ Special Access Elevators [~~Rule 500~~].

(a) Scope: Sections 3093 through 3093.59 ~~60~~ apply to ~~private residence type~~ special access elevators, installed to facilitate access according to Title 24, ~~in or at work places~~ under the jurisdiction of the Division intended for the exclusive use of persons with disabilities.

(b) ~~All private residence type~~ Special access elevators installed in locations under the jurisdiction of the Division shall ~~meet~~ comply with the requirements of Article 15.

EXCEPTIONS to 3093(b):

~~1. Private residence type elevators existing at the time of adoption of this article shall have 3 years to comply.~~

~~2. Private residence type~~ Special access elevators allowed by variance.

(c) The machine and associated controllers and equipment shall be installed meeting the requirements of subsection 3011(a) and be secured against unauthorized access.

(d) Use of the elevator shall ~~be restricted to a physically~~ serve disabled individual(s) only and it shall not be used to transport materials and equipment.

(e) The Division shall inspect the elevator, witness a safety test(s) and issue a permit to operate, prior to it being placed into ~~normal~~ service.

~~NOTE: Numbers indicated in brackets following an order refer to the corresponding ANSI A17.1 1981 rule number.~~

(Title 24, Part 7, Section 7-3093)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(b), Health and Safety Code.

§3093.1. Hoistway Enclosure Construction [~~Rule 500.1~~].

(a) Hoistways shall be fully enclosed meeting the requirements of Section 3010.

(b) Exterior windows within the hoistway shall be protected by grillwork.

(c) Enclosures shall be of sufficient strength to support in true alignment, the hoistway doors, gates and their locking equipment.

(Title 24, Part 7, Section 7-3093.1)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 5 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.2. Pits [~~Rule 500.2~~].

(a) A pit shall be provided and the pit depth shall not be less than is required for the installation of the buffers and all other necessary elevator equipment.

(b) The pit shall be kept clean and free from dirt and rubbish. The pit shall not be used for storage purposes and shall be maintained free of an accumulation of water. [~~500.2a~~]

(Title 24, Part 7, Section 7-3093.2)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.3. Top Car Clearance [~~Rule 500.3~~].

The top car clearance shall be not less than 6 in. (152 mm) plus 1 in. (25 mm) for each 3 1/3 fpm (0.017 m/s) of the rated speed in excess of 30 fpm (0.15 m/s).

(Title 24, Part 7, Section 7-3093.3)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.4. Protection of Hoistway Openings [~~Rule 500.4~~].

(a) Hoistway doors conforming with Section 3020 shall be provided to protect each landing opening.

(b) Hoistway doors shall be provided with approved interlocks complying with Section 3021. EXCEPTION to 3093.4(b): Interlocks may be zoned complying with subsection 3021(d)(1)(D). [~~Rule 500.4~~]

(c) Hoistway doors shall be power-operated for special access elevators installed after September 28, 2001.

(1) The power-operated hoistway doors shall be either horizontally sliding or swing type doors.

(A) Horizontally sliding doors shall have power opening that complies with Section 3022(b)(2), and power closing that complies with Sections 3022(c) and 3022(e).

1. Power-operated doors shall remain open for at least 20 seconds when activated.

(B) Where provided, automatic swing type doors shall be low energy, power-operated, and shall comply with ANSI/BHMA A156.19-1990, American National Standard for power assist and low energy power operated doors, except section 3, which is hereby incorporated by reference.

NOTE: A low energy power-operated door is a door with power mechanisms that open and close the door upon receipt of an actuating signal and does not generate more kinetic energy than specified in ANSI/BHMA A156.19-1990.

(Title 24, Part 7, Section 7-3093.4)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.5. Pipes in Hoistways [~~Rule 500.5~~].

Pipes conveying steam, gas or liquids which, if discharged into the hoistway, would endanger life shall not be installed in the hoistway.

(Title 24, Part 7, Section 7-3093.5)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* OAL to insert the effective date of the regulation.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 6 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.6. Horizontal Car Clearances [~~Rule 500.6~~].

(a) There shall be a clearance of not less than 3/4 in. (19 mm) between the car and the hoistway enclosure, and between the car and its counterweight. [~~500.6a~~]

(b) The clearance between the car platform and the landing sill shall be not less than 1/2 in. (13 mm) nor more than 1 1/2 in. (38 mm). [~~500.6b~~]

(Title 24, Part 7, Section 7-3093.6)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.7. Guarding of Suspension Means [~~Rule 500.7~~].

(a) Ropes and chains passing through a floor or stairway outside the hoistway enclosure shall be enclosed with a solid or openwork enclosure. If of openwork, the enclosure shall reject a ball 1/2 in. (13 mm) in diameter. Means for inspection shall be provided. The floor openings shall not be larger than is necessary to clear the suspension means. [~~500.7a~~]

(b) Ropes and chains immediately adjacent to a stairway shall be guarded with a solid or openwork panels on the stair side. Openwork panels shall reject a ball 1/2 in. (13 mm) in diameter. [~~500.7b~~]

EXCEPTION to subsection 3093.7(b): Ropes or chains which operate within a guide or track shall be considered suitably guarded.

(Title 24, Part 7, Section 7-3093.7)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.8. Car Frames and Platforms.

(a) Car frames and platforms shall be constructed of metal or a combination of metal and wood having a factor of safety of not less than 5 based on rated load.

(b) Cast iron shall not be used in any member of the car frame or platform other than for guides or guide shoe brackets.

(Title 24, Part 7, Section 7-3093.8)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.9. Car Enclosure [~~Rule 501.2~~].

(a) Except at entrances, cars shall be enclosed on all sides and on the top. The enclosure shall be constructed of solid material, except where other material is permitted by the Division. [~~Rule 501.2a~~]

(b) Car enclosures shall be secured in conformance with the requirements of subsections 3034(a)(1) and 3034(a)(2). [~~501.2b~~]

(c) Glass, where used in elevator cars, shall conform to the requirements of subsection 3034(a)(7). [~~501.2e~~]

(Title 24, Part 7, Section 7-3093.9)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 7 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.10. Number of Compartments ~~[Rule 501.3]~~.

The car shall ~~not~~ have ~~more than~~ only one compartment.

(Title 24, Part 7, Section 7-309.10)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.11. Car Doors and Gates ~~[Rule 501.4]~~.

(a) Car doors or gates are required. They shall protect the entire car entrance and be constructed of solid material, ~~except where other material is approved by the Division.~~

(1) Material shall be non-perforated.

(2) Scissor gates are prohibited.

(b) Power opening, where used for car doors and gates, shall conform to the requirements of subsection 3022~~(a)~~ (b)(1). Power closing, where used for car doors and gates, shall conform to the requirements of subsections ~~3022(b)(1)~~, 3022(c), 3022(d), and 3022(e). ~~[501.4a]~~

(c) Power opening and power closing of car doors or gates shall be required for special access elevators installed after September 28, 2001.

(d) ~~(e)~~ Every car door or gate shall be provided with an electric contact conforming to the requirements of subsection 3034(d)(2). The design of the car door or gate electric contacts shall be such that, for a sliding door or gate, the car cannot move unless the door or gate is within 2 in. (51 mm) of the fully closed position. If the door or gate swings outward to open, the car door or gate must be closed and locked before the car can move. ~~[501.4e]~~

(e) ~~(d)~~ ~~Where the distance between the hoistway enclosure opposite the car entrance and the car gate shall not exceeds 5 inches, the car door or gate shall be provided with an interlock, conforming to subsection 3021(d)(2) or a contact lock conforming to subsection 3021(e)(3) that will lock the car door or gate if the car is more than 6 in. (152 mm) away from a landing.~~
~~[501.4b]~~

(Title 24, Part 7, Section 7-3093.11)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.12. Light in Car ~~[Rule 501.5]~~.

The car shall be provided with an electric light. The control switch for the light shall be located in the car and near the car entrance. The minimum illumination at the car threshold, with the door closed, shall be not less than 5 foot candles (54 lux).

(Title 24, Part 7, Section 7-3093.12)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* OAL to insert the effective date of the regulation.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 8 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.13. Counterweights [~~Rule 502.1~~].

- (a) Counterweights, where used, shall run in guide rails.
- (b) Counterweights shall be located as required by subsection 3013(a).
- (c) Where a car counterweight is used, it shall not be of sufficient weight to cause slackening of any rope during acceleration or retardation of the car.
- (d) The counterweight sections, whether carried in a frame or not, shall be fastened together and shall also be secured to prevent shifting by an amount which will reduce the running clearance to less than that specified in subsection 3093.6(a).

(Title 24, Part 7, Section 7-3093.13)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.14. Location and Guarding of Counterweights [~~Rule 502.2~~].

Access shall be provided for inspection, maintenance, and repair of an enclosed counterweight and its ropes. Doors on the counterweight enclosure shall be self-closing and self-locking and openable from the outside only with a suitable key. If the enclosure is of such size that the door can be closed when the enclosure is occupied by a person, the door shall be easily openable from the inside without the use of a key or other instrument. A stop switch conforming to the requirements of subsection 3040(b)(5) shall be located adjacent to and inside the opening and operable without entering the enclosure. [~~502.2e~~]

(Title 24, Part 7, Section 7-3093.14)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.15. Safeties Required [~~Rule 503.1~~].

Each elevator shall be provided with a car safety. Where the space below the hoistway is not permanently secured against access, the counterweight shall be provided with a safety conforming to the requirements of Section 3093.16.

(Title 24, Part 7, Section 7-3093.15)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.16. Operation of Safeties [~~Rule 503.2~~].

The car safety shall be of the inertia or other approved type operated by the breakage of the suspension means or by the action of a speed governor. If ~~of the~~ it is a speed governor type, the governor shall operate the safety at a maximum speed of 75 fpm (0.38 m/s). On the breakage of the suspension means, the safety shall operate without delay and independent of the speed governor action.

(Title 24, Part 7, Section 7-3093.16)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 9 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.17. Application of Safeties [~~Rule 503.3~~].

The application of any safety required by Section 3093.15 shall conform to the requirements of subsection 3035(i).

(Title 24, Part 7, Section 7-3093.17)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.18. Materials Used in Safeties [~~Rule 503.4~~].

The minimum factors of safety and stresses of safety parts and rope connections shall conform to the requirements of subsection 3106(d).

(Title 24, Part 7, Section 7-3093.18)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.19. Location of Speed Governor [~~Rule 503.5~~].

Where a speed governor is used, it shall be located where it is readily accessible from outside the hoistway and it cannot be struck by any moving object in normal operation or under conditions of overtravel and where there is sufficient space for full movement of the governor parts.

(Title 24, Part 7, Section 7-3093.19)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.20. Opening of the Brake Circuit on Safety Application [~~Rule 503.6~~].

Where a speed governor is used, the motor circuit and the brake circuit shall be opened before or at the time that the safety applies.

(Title 24, Part 7, Section 7-3093.20)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.21. Governor Ropes [~~Rule 503.7~~].

The governor ropes shall be of iron, steel, monel metal or phosphor bronze not less than 1/4 in. (6.3 mm) in diameter. Tiller rope construction shall not be used.

(Title 24, Part 7, Section 7-3093.21)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.22. Car and Counterweight Guide Rails and Guide Fastenings [~~Rule 504.1~~].

Car and counterweight guide rails and guide fastenings shall conform to the requirements of subsections 3030(b), 3030(j) and 3106(a)(1), (2).

(Title 24, Part 7, Section 7-3093.22)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 10 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.23. Buffers and Buffer Supports [~~Rule 505.1~~].

(a) The car and counterweight shall be provided with spring buffers so designed and installed that they will not be fully compressed when struck by car with its rated load and speed or by the counterweight traveling at 125% of the rated speed, or at governor tripping speed where a governor-operated safety is used.

(b) Car and counterweight-buffer supports shall be of sufficient strength to withstand without failure the impact resulting from buffer engagement at 125% of the rated speed, or at governor tripping speed where a governor-operated safety is used.

(Title 24, Part 7, Section 7-3093.23)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.24. Overhead Machinery Beams and Supports [~~Rule 506.1~~].

(a) All machinery and sheaves shall be so supported and secured as to prevent any part from becoming loose or displaced. [~~506.1a~~]

(b) Beams supporting machinery shall be of steel, sound timber or reinforced concrete.

(c) Overhead beams and their supports shall be designed for not less than the sum of the following: [~~506.1b~~]

(1) The load resting on the beams and their supports which shall include the complete weight of the machine, sheaves, controller and any other equipment supported thereon.

(2) Two times the sum of the tension on all suspension ropes or chains.

(Title 24, Part 7, Section 7-3093.24)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.25. Material for Sheaves and Drums and Minimum Diameter [~~Rule 506.2~~].

(a) Winding drums, traction sheaves, and overhead and deflecting sheaves shall be of cast iron or steel and of a diameter of not less than 30 times the diameter of the wire suspension means. The rope grooves shall be machined and designed to conform with the requirements of subsection 3038(b).

EXCEPTION to subsection 3093.25(a): Where 8 x 19 steel ropes or 7 x 19 aircraft cable are used, the required minimum diameter of drums and sheaves may be reduced to 21 times the diameter of the rope.

(b) The factor of safety, based on the static load (the rated load plus the weight of the car, ropes, counterweights, etc.) to be used in the design of the driving machine and sheaves shall be not less than 8 for wrought iron and steel, and 10 for cast iron, cast steel and other metals.

(Title 24, Part 7, Section 7-3093.25)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 11 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.26. Fastening of Driving Machines and Sheaves to Underside of Overhead Beams [~~Rule 506.3~~].

(a) Overhead driving machines or sheaves shall not be fastened to the underside of the supporting beams.

EXCEPTION to subsection 3093.26(a): Idlers or deflecting sheaves including the guards and frames.

(b) Cast iron in tension shall not be used for supporting idler and deflections sheaves where they are hung beneath the beams.

(Title 24, Part 7, Section 7-3093.26)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.27. Factor of Safety for Overhead Beams and Supports [~~Rule 506.4~~].

The factor of safety for overhead beams and supports based on ultimate strength of material shall not be less than 5 for steel, and 6 for timber and reinforced concrete.

(Title 24, Part 7, Section 7-3093.27)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.28. Hydraulic Driving Machine [~~Rule 506.5~~].

Hydraulic Driving Machines shall conform to the requirements of Section 3067.

EXCEPTION to Section 3093.28: Roped-hydraulic machines may be used.

(Title 24, Part 7, Section 7-3093.28)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.29. Screw Machines [~~Rule 506.6~~].

Screw machines, where used, shall conform to the requirements of Section 3088.

EXCEPTION to Section 3093.29: The rated speed shall not exceed 40 fpm (0.20 m/s).

(Title 24, Part 7, Section 7-3093.29)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.30. Set Screw Fastenings [~~Rule 506.7~~].

Set screw fastenings shall not be used in lieu of keys or pins if the connection is subject to torque or tension.

(Title 24, Part 7, Section 7-3093.30)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.31. Friction Gearing, Clutch Mechanism, or Couplings [~~Rule 506.8~~].

Friction gearing, clutch mechanisms, or couplings shall not be used for connecting the drum or sheaves to the main drive gear.

(Title 24, Part 7, Section 7-3093.31)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 12 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.32. Use of Cast Iron in Gears [~~Rule 506.9~~].

Worm gearing having cast iron teeth shall not be used.

(Title 24, Part 7, Section 7-3093.32)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.33. Driving-Machine Roller Chains and Sprockets [~~Rule 506.10~~].

Driving-machine chains and sprockets shall be of steel and shall conform ~~in all particulars of to~~ the design and dimensions ~~to specified in ANSI B29.1-1975 ASME B29.1M-1993~~, Precision Power Transmission Roller Chains, Attachments, and Sprockets, which is hereby incorporated by reference.

(Title 24, Part 7, Section 7-3093.33)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.34. Driving-Machine Brakes [~~Rule 506.11~~].

Driving-machines shall be equipped with electrically released, mechanically applied brakes conforming to the requirements of subsection 3038(h). The operation of the brake shall conform to the requirements of subsection 3040(e).

EXCEPTION to Section 3093.34: Hydraulic driving machines.

(Title 24, Part 7, Section 7-3093.34)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.35. Terminal Stopping Devices [~~Rule 507.1~~].

(a) Upper and lower normal terminal stopping devices, operated by the car, shall be provided and shall be set to stop the car at, or near, the upper and lower terminal landings. The switches shall be opened as required by Section 3039(a).

(b) Upper and lower final terminal stopping devices shall be provided, operated by the car, to remove power from the motor and the brake. They shall be set to stop the car after it travels past the normal terminal stopping device and before an obstruction is struck. The switches shall be opened as required by Section 3039(b).

EXCEPTION to subsection 3093.35(b): A slack-rope switch conforming to the requirements of subsection 3040(b)(1) may be used as the lower final terminal stopping device.

(c) If the driving machine is of the winding drum or sprocket and chain suspension type, a final terminal stopping device operated by the driving machine shall also be provided.

(Title 24, Part 7, Section 7-3093.35)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943, Health and Safety Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 13 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.36. Operation of the Stopping Devices [~~Rule 507.2~~].

(a) The final terminal stopping device shall act to prevent movement of the car in both directions of travel. The normal and final terminal stopping devices shall not control the same switches on the controller unless two or more separate and independent switches are provided, two of which shall be closed to complete the motor and brake circuit in each direction of travel.

(b) The switches required in subsection 3093.36(a) shall be positively opened mechanically as required by 3039(a).

(Title 24, Part 7, Section 7-3093.36)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.37. Type of Operation [~~Rule 508.1~~].

(a) The operation of the car shall be by continuous pressure means or by single automatic means.

(b) ~~The operation shall be key locked with a lock complying to Section 3093.39, except where other types are permitted by the Division. The key shall be available on the premises under the control of an authorized person acceptable to the Division.~~ Special access elevators may be locked for security reasons, except during business hours.

(Title 24, Part 7, Section 7-3093.37)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.38. Control and Operating Circuit Requirements [~~Rule 508.2~~].

(a) Control systems that depend on the completion of an electric circuit shall not be used for:

- (1) ~~the~~ interruption of ~~the~~ power and the application of the brake at the terminals;
- (2) ~~the~~ stopping of the car when the emergency stop switch in the car is opened, or when any of the electrical protective devices operate;
- (3) ~~the~~ stopping of the machine when the safety applies.

(b) If springs are used to actuate switches, contactors or relays, or to break the circuit to stop a car or carriage at a terminal, they shall be of the restrained compression type.

(c) The failure of any single magnetically operated switch, relay or contactor to release in its intended manner, or the occurrence of a single accidental ground, shall not permit the car to start if any hoistway door, or car door, or gate is not in the closed position.

(d) If an instantaneous reversible motor is not used, a protective device or circuit shall be provided to prevent the motor from continuing in the same direction if the reversing control is actuated.

(Title 24, Part 7, Section 7-3093.38)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 14 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.39. Key-Operated Switches [~~Rule 508.3~~].

~~Any car exterior to a structure shall be operated by means of a key switch. Key operated switches shall be of continuous pressure spring return type and shall be operated by a cylinder type lock having not less than a 5 pin or 5 disc combination, with the key removable only when the switch is in the off position.~~

~~(Title 24, Part 7, Section 7-3093.39)~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.40. Electric Equipment and Wiring [~~Rule 508.4~~].

All electrical equipment and wiring shall conform to the requirements of subsection 3012(a).

(Title 24, Part 7, Section 7-3093.40)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.41. Power Supply-Line Disconnecting Means [~~Rule 508.5~~].

Power supply-line disconnecting means conforming to the requirement of CCR, Title 24, Part 3, Article 620, shall be provided.

(Title 24, Part 7, Section 7-3093.41)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.42. Phase Reversal and Failure Protection [~~Rule 508.6~~].

Phase reversal and failure protection shall conform to Section 3040(c)(2).

(Title 24, Part 7, Section 7-3093.42)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.43. Emergency Stop Switch [~~Rule 508.7~~].

An emergency stop switch, conforming to the requirements of subsection 3040(b)(5), shall be provided in every car.

(Title 24, Part 7, Section 7-3093.43)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 15 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.44. Slack-Rope and Slack-Chain Devices ~~for Winding Drum and Roller Chain Type Driving Machines [Rule 508.8].~~

(a) Winding drum machines with rope suspension shall be provided with a slack-rope device of the manually reset type that will remove power from the motor and brake if the car is obstructed in its descent and the hoisting ropes slacken.

(b) Elevators with roller chain suspension shall be provided with a slack chain device which will remove power from the motor and the brake if the car is obstructed in its descent and the suspension means slacken. This device need not be of the manually reset type if the chain sprockets are guarded to prevent the chain from becoming disengaged from the sprockets.

(c) Roped and chain hydraulic elevators shall be provided with a slack device which will remove power from the motor and the brake if the car is obstructed in its descent and the suspension means slacken.

(Title 24, Part 7, Section 7-3093.44)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.45. Emergency Devices ~~[Rule 509.1].~~

(a) A telephone, which is connected to a central telephone exchange, shall be installed in the car and an emergency signalling device, operable from inside the car and audible outside the hoistway, shall be provided.

(b) All machines shall be provided with a means to lower the car in case of power failure. The device shall be painted bright red or orange and shall have suitable instructions for use and warnings about use affixed to the operating means.

(Title 24, Part 7, Section 7-3093.45)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 16 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.46. Capacity [~~Rule 510.1~~].

(a) The rated load for existing special access elevators shall not exceed 700 lb.₂ (318 kg) and the maximum clear inside net platform area shall not exceed 12 ft.₂ (1.1 m²). The minimum rated load shall be not less than that based on 40 lb.₂/ft.₂ (1.91 kPa) of clear inside net platform area or 350 lb.₂ (159 kg), whichever is greater.

(b) The load capacity for special access elevators installed after September 28, 2001 shall be not less than 750 lb., and have a minimum of 32 in. x 54 in. clear inside platform dimensions.

(1) Special access elevators without a front and rear opening that facilitates a straight through ingress/egress shall have a load capacity of not less than 750 lb., and a maximum 18 sq. ft. clear inside net platform area. The clear inside platform width dimensions may range from 42 inches minimum to 48 inches maximum on one side by 60 inches maximum to 54 inches minimum length on the other side.

(A) When the platform minimum width of 42 inches is increased, the platform maximum 60 inch length shall be decreased by the number of inches that the width has been increased (see table below).

Table 3093.46(b)
Varying Platform Size

Width x Length

42" x 60"

43" x 59"

44" x 58"

45" x 57"

46" x 56"

47" x 55"

48" x 54"

(2) The platform/car shall be equipped with handrail(s) complying with Title 24, Section 7-3003. The clear inside net platform area shall be calculated by multiplying the platform width by the platform length without consideration of the space occupied by the handrails.

(3) The opening and closing of car doors shall not encroach on the car platform inside clear space.

(Title 24, Part 7, Section 7-3093.46)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.47. Speed [~~Rule 510.2~~].

The rated speed shall not exceed 40 fpm (0.20 m/s).

(Title 24, Part 7, Section 7-3093.47)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* Insert the effective date of the regulation.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 17 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.48. Rise ~~[Rule 510.3]~~.

The rise shall not exceed 50 ft. (12.19 m).

(Title 24, Part 7, Section 7-3093.48)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code

§3093.49. Capacity Plate ~~[511.1]~~.

A capacity plate indicating the rated load of the elevator in pounds shall be ~~furnished by the manufacturer and~~ fastened in a conspicuous place inside the car. The letters and figures on such plates shall be not less than 1/4 in. (6.3 mm) in height.

(Title 24, Part 7, Section 7-3093.49)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.50. Data Plates ~~[511.2]~~.

A data plate indicating the weight of the elevator, the rated speed, the suspension means, the manufacturer's name, and the date of installation shall be ~~furnished by the manufacturer. This plate shall be~~ installed in a conspicuous place in the machinery area. The letters and figures on such plates shall be not less than 1/4 in. (6.3 mm) in height.

(Title 24, Part 7, Section 7-3093.50)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.51. Suspension Means.

Suspension means shall be not less than two wire ropes or two steel roller-type chains.

(Title 24, Part 7, Section 7-3093.51)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.52. Suspension Ropes ~~[Rule 512.2]~~.

(a) On elevators having a rated load of 450 lb. (204 kg) or less and operating at a rated speed of 30 fpm (0.15 m/s) or less, suspension ropes shall be not less than 1/4 in. (6.3 mm) in diameter.

~~Where the rated load exceeds 450 lb. (204 kg) or the rated speed exceeds 30 fpm (0.15 m/s) the suspension ropes shall be not less than 3/8 in. (9.5 mm) in diameter.~~

(b) On elevators having a rated load of more than 450 lb. and less than 750 lb. and operating at a rated speed of 30 fpm or less, suspension ropes shall be not less than 3/8 in. in diameter.

(c) Where the rated load is more than 750 lb. or the rated speed exceeds 30 fpm, each suspension rope shall have a safety factor of not less than 7.5.

(Title 24, Part 7, Section 7-3093.52)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 18 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.53. Factor of Safety Suspension Means [~~Rule 512.3~~].

The factor of safety of the suspension means shall be not less than 7 based on the manufacturer's rated breaking strength. When the car and counterweight are suspended by steel ropes and the driving means is an endless steel roller type chain, the factor of safety of such a chain, with the rated load in the car, shall be not less than 8 based on the ultimate tensile strength.

(Title 24, Part 7, Section 7-3093.53)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.54. Arc of Contact of Suspension Means on Sheaves and Sprockets [~~Rule 512.4~~].

The arc of contact of a wire rope on a traction sheave shall be sufficient to produce traction under all load conditions up to the rated load. The arc of contact of a chain with a driving sprocket shall not be less than 140 degrees.

(Title 24, Part 7, Section 7-3093.54)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.55. Idle Turns of Ropes on Winding Drums [~~Rule 512.5~~].

The idle turns of ropes on winding drums shall conform to the requirements of subsection 3042(h)(2).

(Title 24, Part 7, Section 7-3093.55)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.56. Securing of Wire Suspension Ropes to Winding Drums [~~Rule 512.6~~].

The securing of wire suspension ropes to winding drums shall conform to the requirements of subsection 3042(h)(1).

(Title 24, Part 7, Section 7-3093.56)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.57. Splicing, Replacement, and Reshackling of Suspension Ropes [~~Rule 512.7~~].

Splicing is prohibited; replacement and reshackling of suspension ropes shall conform to the requirements of subsection 3042(i).

(Title 24, Part 7, Section 7-3093.57)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.58. Fastening of Wire Ropes Suspension Means to the Car or to the Counterweights [~~Rule 512.8~~].

The fastening of a wire rope suspension means to a car or to a counterweight shall conform to the requirements of subsection 3042(j), or by properly attached fittings as recommended by wire rope manufacturers.

(Title 24, Part 7, Section 7-3093.58)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 19 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3093.59. Replacement of Chains and Sprockets.

If chains are used as a suspension means and a worn chain is replaced, all chains must be replaced and all sprockets must be replaced. ~~§12.9~~

(Title 24, Part 7, Section 7-3093.59)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3093.60. Maintenance for Special Access Elevators.

(a) The owner shall develop, implement, and maintain a written maintenance program in accordance with the manufacturer's recommendations.

(b) The written maintenance program shall be available to the Division during inspection for issuance of the permit to operate.

(c) Maintenance shall be performed by person(s) deemed qualified by the State of California Contractors State License Board.

(Title 24, Part 7, Section 7-3093.60)

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code: and Section 18943(b), Health and Safety Code.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

Page 20 of 20

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Article 36 to read:

Article 36. Special Access Elevators and Special Access Lifts

§3136. Special Access Elevators and Special Access Lifts.

Special access elevators and special access lifts shall comply with Group II, Article 15, of the Elevator Safety Orders, commencing with Section 3093.

(Title 24, Part 7, Section 7-3136.)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(b), Health and Safety Code.